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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,988	12/21/2000	Hiroshi Arita		5452

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EXAMINER	
COSIMANO, EDWARD R	

ART UNIT	PAPER NUMBER
3629	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/740,988	ARITA ET AL.	
	Examiner	Art Unit	
	Edward R. Cosimano	3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-21,23-28,30 and 31* is/are pending in the application.

4a) Of the above claim(s) *none* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-21,23-28,30 and 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *2/18/04 & 9/2/04* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/290,170.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/4/04; 9/2/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Applicant should note the changes to patent practice and procedure:

A) effective December 01, 1997 as published in the Federal Register, Vol 62, No. 197, Friday October 10, 1997;

B) effective November 07, 2000 as published in the Federal Register, Vol 65, No. 54603, September 08, 2000; and

C) Amendment in revised format, Vol. 1267 of the Official Gazette published February 25, 2003.

2. Applicant's claim for the benefit of an earlier filing data under 35 U.S.C. § 120 is acknowledged.

3. The proposed new sheets of drawings filed February 18, 2004 and 02 September 2004 have been approved.

3.1 The substitute specification filed 18 February 2004 with substitute pages 2 & 42 as amended 02 September 2004 has been entered as the official specification for the instant application.

4. The combined set of drawings filed December 21, 2000 and February 18, 2004 and 02 September 2004 is objected to because

A) the following errors have been noted in the drawings:

(1) as can be seen in figure 5 this figure lacks the "Y" and "N" legends for flow boxes 503, 505, 507 & 509 as disclosed in the paragraphs between page 20, line 4, and page 21, line 8, of the substitute specification filed February 18, 2004 "Fig, 5 is a flow chart ... the interchange in a free market style.".

4.1 Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the

several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The specification and drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification or drawings. Applicant should note the requirements of 37 CFR § 1.74, § 1.75, § 1.84(o,p(5)), § 1.121(a)-1.121(f) & § 1.121(h)-1.121(i).

6. Claims 19-21, 23-28, 30 & 31 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6.1 In regard to claims 19-21, 23-28, 30 & 31, although on of ordinary skill at the time of the invention would known how to accomplish each of the individual recited actions/functions from the language of these claims, since, there is no clear and definite interconnection between one or more of the recited limitations of these claims, one of ordinary skill could not determine from the language of these claims whether or not they are in fact making and/or using the claimed invention. In this regard it is noted that from the language of these claims it is vague, indefinite and unclear:

A) in regard to lines 1 & 9-12 of claim 19, "A method of settling ... settling the transmission of the power in accordance with converted value of environmental load including generated carbon oxide gas", what is settled because a settlement requires an exchange of something in view of a consideration for the exchange, and as recited in this claim the power demand in one of the two countries is supplied from two separate and distinct different sources of transmitted/interchanged power, that is a first source is from within the country demanding power (note lines 5-8: "a power generating facility handling at least a portion of power demand occurring the other country is located the

other country") and the second source is from the outside the country demanding power (note lines 2-5: "transmitting electric power across a border between two countries, wherein a power generating facility handling at least a portion of power demand occurring in one of the countries is located in the one country"), hence it is unclear, vague and indefinite which of these transmissions/interchanges of power is settled.

B) in regard to lines 1 & 8-10 of claim 23, "A method of settling ... including settling the transmission of the power by a unified currency acknowledged by at least these two countries, ...", what is settled using an "unified currency acknowledged by at least these two countries", because a settlement requires an exchange of something in view of a consideration for the exchange, and as recited in this claim the power demand in each of the two countries is supplied from within each of the two separate and distinct countries, that is a first source of power for the first country is within the first country demanding power (note lines 3-5: "a power generating facility handling at least a portion of power demand occurring the other country is located the other country") and the second source is within the second or other country demanding power (note lines 5-7: "power generating facility handling at least a portion of power demand occurring the other country is located in the other country"), hence:

(1) there is no transmission/interchange of power "across a border between two countries" to be settled using an "unified currency acknowledged by at least these two countries"; and

(2) there is no need to use a delay timers when using "at least one of satellite communication facilities, optical communication facilities, microwave communication facilities and telephone circuit communication facilities" to transmit control signals to the "alternating current/direct current converter between said system and said energy path".

In this regard note also the references to interchanges in claims 24 & 31.

C) in regard to claim 24, the nature or source of:

(1) the "said converted values", since no values of have been converted in either claim 23 or claim 24; and

(2) either the "interconnection adjustment equipment" or "interchange administration equipment", that is used to transmit the "converted values" from the "interconnection adjustment equipment", since these devices have not been mentioned in claim 23.

D) in regard to claim 25, from where and to where the information on exchange rates is transmitted using translation machines, since this information is not used by the rest of the invention of claims 23 & 25.

E) in regard to claim 26, why and how "the generated power amount is controlled such that overall fuel consumption amount is lower than a predetermined value", since the overall fuel consumption does not have anything to do with the settlement of an exchange of power as recited in claim 23.

F) in regard to claim 27, why and how "a system having electric power of good quality and a system having electric power of poor quality and said system is controlled such that power flow flows from said system of good electric power to said system of poor electric power", since:

(1) either the quality of power or the direction of flow of power does not affect the settlement of an exchange of power as recited in claim 23; and

(2) no power is exchanged in claim 23.

G) in regard to claim 28, why and how "power generating facilities are located in countries having at least two hours time difference and energy transmitted from said one system to said another system is controlled using demand estimation data", since power is not exchanged and hence the demand estimation data would be of little use when settling an exchange of power as recited in claim 23.

H) in regard to claim 30, why and how the information on either:

(1) "said power generating facilities", or

(2) "information to which time information detected by a transmission time difference detector for detecting time difference for information transmission is added," or

(3) "said interchanged electric energy, restriction on said interchanged electric energy," or

(4) operation information on a direct current power transmission system";

is transmitted, since power is not exchanged and hence the transmitted information would be of little use when settling an exchange of power as recited in claim 23.

I) in regard to claim 31, why and how the "consideration to said settlement" "may be at least one of CO_2 emission right which concerns with CO_2 emissions utilities, fuel, electrical energy or money", since:

(1) there is no exchange of power in claims 23 & 24; and

(2) it is unclear how these values are related to the converted values of claim 24.

6.2 In regard to claims 19-21 & 23, since as recited in these claims there are two separate and distinct countries that exchange power, applicant reference to "one country" and "the other country" is vague, indefinite and confusing as to which of the two countries applicant is refereeing to when using these phrases.

6.3 In regard to claims 19-21, these claims are vague, indefinite and confusing since it is unclear how and what is converted to a "converted value of environmental load including generated carbon oxide gas".

6.4 In regard to claims 19-21, these claims are vague, indefinite and confusing since it is unclear how a "converted value of environmental load including generated carbon oxide gas", may be sued to settle the transmission of power.

6.5 In regard to claim 20, applicant's use of the phrase "settling the reception of the power by environmental value" in this claim is confusing, since applicant uses the phrase "environmental load" in claim 19, when referencing the settlement of for the transmission of power.

6.6 In regard to claims 20 & 21, these claims are vague, indefinite and unclear since the there are two separate sources of power in claim 19, note above, hence, it is unclear for which of these transmissions/interchanges of power is settled

6.7 In regard to lines 12-13 of claim 23, since this claim fails to recite either a "system" or an "energy path", these terms lack antecedent basis in this claim.

6.8 In regard to claims 19-21 & 31, these claims recite a method of settling the exchange of power between two different countries to meet the demand for power by the other country by using an "environmental load" as the consideration for the exchanged power. However, since for example:

A) each country would have it's own governmental mandated regulations concerning the release of pollution, note the EPA in the United States;

B) each country may have international disputes over pollution crossing the border from one of the countries into the other country, note the disagreement between Canada and the United States over this matter;

C) such a method of settlement would require an international treaty that addresses how the environment concerns are to be handled by each of the parties to the treaty; and

D) it is unclear form the claims what is to be considered as "environment value";

it is unclear, vague and indefinite how one of ordinary skill could ever implement the claimed invention is regard to determining what is "environment value" and how such an settlement would be implemented by the participating countries.

6.9 Claims 19-21 & 31 are inoperative and therefore lack utility for the recited purpose of the disclosed and claimed invention, since:

A) for the reason set forth above in points (A)-(D) above in section 6.8, one of ordinary skill could not implement a usable version of the claimed invention.

For as the Court has specifically pointed out, claims must recite utility for the disclosed purpose of the invention, (General Electric Co. V. U.S., 198 U.S.P.Q. 65 (U.S. Court of Claims, 1978), Hanson v. Alpine Valley Ski Area 204 U.S.P.Q. 794 (District Court, E. D. Michigan, N. Div. 1978) and Banning v. Southwestern Bell Telephone C., 182 U.S.P.Q. 683 (SD Tex, 1974)).

6.10 Claims not specifically mentioned above, inherit the defects of the base claim through dependency. For the above reason(s), applicant has failed to particularly point out what is regarded as the invention.

7. 35 U.S.C. § 101 reads as follows:

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title".

7.1 Claims 19-21, 23-28, 30 & 31 are rejected under 35 U.S.C. § 101 because the invention as claimed is directed to non-statutory subject matter.

7.1.1 As set forth by the Court in:

A) In re Musgrave 167 USPQ 280 at 289-290 (CCPA 1970), "We cannot agree with the Board that these claims (all the steps of which can be carried out by the disclosed apparatus) are directed to non-statutory processes merely because some or all of the steps therein can also be carried out in or with the aid of the human mind or because it may be necessary for one performing the process to think. All that is necessary, in our view, to make a sequence of operational steps a statutory "process" within 35 U.S.C. 101 is that it be in the technological arts so as to be in consonance with the Constitutional purpose to promote the progress of "useful arts." Cons. Art. 1, sec. 8.", {emphasis added}; and

B) In re Sarkar 100 USPQ 132 @ 136-137 (CCPA 1978), echoing the Board of Appeals stated in regard to claim 14 "14. A method of locating an obstruction in an open channel to affect flow in a predetermined manner comprising:

a) obtaining the dimensions of said obstruction which affect the parameters of flow;

b) constructing a mathematical model of at least that portion of the open channel in which said obstruction is to be located in accordance

with the method of claim 1 using those dimensions obtained in step (a) above;

c) adjusting the location of said obstruction within said mathematical model until the desired effect upon flow is obtained in said model; and thereafter

d) constructing said obstruction within the actual open channel at the specified adjusted location indicated by the mathematical model.";

and "Concerning claims 14-39 and the significance of "post-solution activity," like building a bridge or dam, the board concluded: While it is true that the final step in each of these claims makes reference to the mathematical result achieved by performing the prior recited steps, we consider the connection to be so tenuous that the several steps recited in each claim when considered as a whole do not constitute a proper method under the statute.", {emphasis added}.

7.1.2 Further, it is noted in regard to claims 14-39 of Sarkar, although step (d) of claim 14 of Sarkar references the result of step (c) of claim 14 of Sarkar it is clear from the language of step (c) of claim 14 of Sarkar that multiple adjustments to the location of the obstruction are required to be made until a location with the desired effect has been determined. Hence, the reference to constructing the obstruction at the "specified adjusted location" in step (d) of claim 14 of Sarkar is vague, indefinite and unclear in regard to which one of the possible multiple adjusted locations of the obstruction that were used during step (c) of claim 14 of Sarkar would be used when constructing the obstruction as required by step (d) of Sarkar. Therefore, without a clear connection between step (d) of Sarkar and the remaining steps of claim 14 of Sarkar, the Board of Appeals and the Court held that these claims where not a process with in the meaning of process as used in 35 U.S.C. § 101 and hence were directed to non statutory subject matter.

7.1.3 As can be seen from claims 19-21, 23-28, 30 & 31, these claims are directed to a series of devices or steps/actions/functions, which as set forth above in regard to the rejection of claims 19-21, 23-28, 30 & 31 under 35 U.S.C. § 112 2nd paragraph, the recited limitations are not clearly and definitely interconnected to one another and therefore do not provide a useful

system or method/process with in the meaning of machine or process as used in 35 U.S.C. § 101.

7.2 Claims 19-21, 23-28, 30 & 31 are rejected under 35 U.S.C. § 101 because the invention as claimed is directed to non-statutory subject matter, since they lack substantial and practical utility.

A) it is respectfully noted that claims 19-21 & 31 lack utility for settling an exchange of power between two countries as set forth above in sections 6.8 & 6.9; and

B) it is respectfully noted that claims 23-28, 30 & 31 lack utility for settling an exchange of power between two countries as set forth above since the claims fail to recite that power is exchanged between two or more countries.

In view of the above, it is considered that the invention of claims 19-21 & 31 lack substantial and practical utility.

7.3 Claims 19-21, 23-28, 30 & 31 are rejected under 35 U.S.C. § 101 because the invention as claimed is directed to non-statutory subject matter, since:

A) in regard to claims 19-21, 23-28, 30 & 31, these claims fail to comply with the "requirements this title, namely 35 U.S.C. § 112 2nd paragraph as set forth above; and

B) in regard to claims 19-21, 23-28, 30 & 31, these claims fail to comply with the "requirements this title, namely 35 U.S.C. § 103 as set forth below.

8. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

(c) Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability

under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

8.1 Claims 19-21, 23-28, 30 & 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Meisen: "Worldwide Interconnections May Be An Idea Whose Time Has Come", Global Energy Network in view of Forrister ("The Kyoto Protocol", The Emissions Trader, January 1998, vol. 2 issue 1).

8.1.1 In regard to claims 19-20, 23-25, 28, 30 & 31, the article by Meisen ("Worldwide Interconnections May Be An Idea Whose Time Has Come", Global Energy Network: here in after Meisen) discloses that it is economically and environmentally desirable to use an electrical power distribution grid that includes the ability for the excess power generation/production capacities in a first country to be interchanged/transmitted/exchanged across international borders so as to be used to supplement the supply of power generated/produced in a second different country that is connected to the international distribution grid. In this manner the demands for power for any of the countries connected to the international distribution grid may be meet regardless of any time and/or seasonal differences between the countries connected to the international distribution grid. Further, as is common, producers of power to regularly interchange/transmit/exchange power between various countries by selling/trading the power that has generated/produced in excess of the current local demand for power to another country. Where during these interchanges/transmissions/exchanges of the generated/produced power that is interchanged/transmitted/exchanged are settled in view of some mutually agreeable consideration between the receiving country to the transmitting country, for example a common currency. In regard to claim 23, it is noted that the above process would apply to a nation power distribution grid.

8.1.2 In regard to the use of environmental values/loads as recited in claims 19-21 & 31, although the article by Meisen mentions that it is environmentally desirable to trade power by interchanging/transmitting/exchanging power between countries, Meisen does not use environmental values/loads as the consideration during the settlement process for the

interchange/exchange/transmission of power. However, such a concept of using environmental values/loads as the consideration during the settlement process for the interchange/exchange/transmission of power has been set forth by the article by Forrister ("The Kyoto Protocol", The Emissions Trader, January 1998, vol. 2 issue 1: here in after Forrister). Since, Forrister discloses that it is known to trade emissions for power, it would have been obvious to one of ordinary skill at the time of the invention that "environmental values/loads" may used as the consideration in the settlement process for the interchange/exchange/transmission of power from a first country to a second country.

8.1.3 Further in regard to the proper control of the interchange/exchange/transmission of power over the distribution grid as well as the use of alternating current to direct current converters in the interchanging/transmitting/exchanging of power over a distribution grid as recited in claims 23, since any type of the improper interchanging/transmitting/exchanging of power over any distribution grid would be economically unfeasible for either the transmitting or receiving parties as well as dangerous to the distribution grid as a whole, it would have been obvious to one of ordinary skill at the time of the invention that power interchanging/transmitting/exchanging of system/method of Meisen in view of Forrister would implement suitable control measures and protocols so as to prevent the improper interchanging/transmitting/exchanging of power over the international power distribution grid.

8.1.4 In regard to claims 26-27, it is noted that since power distribution system/method of Meisen in view of Forrister requires the economical generation/production of power, it would have been obvious to one of ordinary skill at the time of the invention that power interchanging/transmitting/exchanging of system/method of Meisen in view of Forrister could use any suitable method of producing a quality of power by any economically feasible method, absent applicant's showing of new and unexpected results from using a particular methods to produce/generate power.

9. Response to applicant's arguments.

9.1 All rejections and objections of the previous Office action not repeated or modified and repeated here in have been over come by applicant's last response.

10. The shorten statutory period of response is set to expire 3 (three) months from the mailing date of this Office action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward Cosimano whose telephone number is (703) 305-9783. The examiner can normally be reached Monday through Thursday from 7:30am to 6:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss, can be reached on (703)-308-2702. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1113.

11.1 The fax phone number for **UNOFFICIAL/DRAFT FAXES** is (703) 746-7240.

11.2 The fax phone number for **OFFICIAL FAXES** is (703) 872-9306.

11.3 The fax phone number for **AFTER FINAL FAXES** is (703) 872-9306.

11/27/04

Edward Cosimano

Edward R. Cosimano
Primary Examiner A.U. 3629